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TITLE: Heat stable xylanase - useful especially in bleaching of paper pulp and for production of xylose and related oligosaccharide(s) from plant material

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PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9714803 A1	April 24, 1997	E	033	C12N 015/56
JP 11514235 W	December 7, 1999	N/A	031	C12N 015/09
AU 9672932 A	May 7, 1997	N/A	000	C12N 015/56
EP 857215 A1	August 12, 1998	E	000	C12N 015/56
NO 9801707 A	June 16, 1998	N/A	000	C12N 009/12
HU 9900738 A2	June 28, 1999	N/A	000	C12N 015/56

DESIGNATED-STATES: AL AM AU AZ BB BG BR BY CA CN CZ EE GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LV MD MG MK MN MW MX NO NZ PL RO RU SD SG SI SK TJ TM TR TT UA UG US UZ VN AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL O A PT SD SE SZ UG AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

CITED-DOCUMENTS: 3.Jnl.Ref; EP 507723 ; EP 634490 ; WO 9213942 ; WO 9518219

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
WO 9714803A1	N/A	1996WO-EP04485	October 15, 1996
JP 11514235W	N/A	1996WO-EP04485	October 15, 1996
JP 11514235W	N/A	1997JP-0515518	October 15, 1996
JP 11514235W	Based on	WO 9714803	N/A
AU 9672932A	N/A	1996AU-0072932	October 15, 1996
AU 9672932A	Based on	WO 9714803	N/A
EP 857215A1	N/A	1996EP-0934697	October 15, 1996
EP 857215A1	N/A	1996WO-EP04485	October 15, 1996
EP 857215A1	Based on	WO 9714803	N/A
NO 9801707A	N/A	1996WO-EP04485	October 15, 1996
NO 9801707A	N/A	1998NO-0001707	April 16, 1998
HU 9900738A2	N/A	1996WO-EP04485	October 15, 1996
HU 9900738A2	N/A	1999HU-0000738	October 15, 1996
HU 9900738A2	Based on	WO 9714803	N/A

INT-CL C12N001/21, C12N009/12 , C12N009/14 , C12N009/24 , C12N015/09 , C12N015/55 ,
(IPC): C12N015/56 , C12N015/70 , C12N015/75 , C12P021/00 , C12N001/21 , C12R001:19

ABSTRACTED-PUB-NO: WO 9714803A

BASIC-ABSTRACT:

A novel xylanase (A) has at least 80%, preferably 90%, homology with the sequence:
NTYWQYWTDG IGYVNATNGQ GGNYSVSWSN SGNFVIGKGW QYGAHNRVFN YNAGAWQPNG
NAYLTLYGWT RNPLIEYYVV DSWGSRPTG DYRGSVYSDG AWYDLYHSWR YNAPSIDGTQ
TFQQYWSVRQ QKRPTGSNVS ITFENHVNWA GAAGMPMGSS WSYQVLATEG YYSSGYSNVT
VW Also new are: (1) a nucleic acid (I) encoding (A), with the 549 bp sequence given in the
specification; and (2) a vector, particularly a plasmid, containing (I).

USE - (A) is used for bleaching paper pulp, and for the production of xylose and xylo-
oligosaccharides from plant raw materials, e.g. corn cobs. Other possible uses of
xylanases are in food manufacture (baking, clarification of fruit juices and wine, improving
nutritional quality of cereal fibre and in preparation of thickeners), in purification of fibres
for rayon manufacture, in poultry feed to reduce viscosity, improving filtration of glucose
syrup and beer, and in the synthesis of chemicals from hemicellulose.

ADVANTAGE - (A) has a high thermal stability (stable for 24 hr at about 60 deg. C), degrades a wide range of substrates, and can be produced on a large scale as recombinant protein. Variation of the amino acid sequence of (A) is possible, allowing optimisation of enzymatic properties. (A) is obtained free of contamination by cellulases and its bleaching activity is relatively insensitive to the degree of dilution of the pulp.

CHOSEN- Dwg.0/3
DRAWING:

**TITLE-TERMS: HEAT STABILISED XYLANASE USEFUL BLEACH PAPER PULP PRODUCE
 XYLOSE RELATED OLIGOSACCHARIDE PLANT MATERIAL**

DERWENT-CLASS: D16 D17 F09

CPI-CODES: D05-C03; D05-C03C; D05-H12A; D05-H12E; D05-H17A3; D06-B; F05-A02B;

SECONDARY-ACC-NO:

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